

Mojave River Pipeline Spill

San Bernardino County CA



Mojave River Pipeline Spill



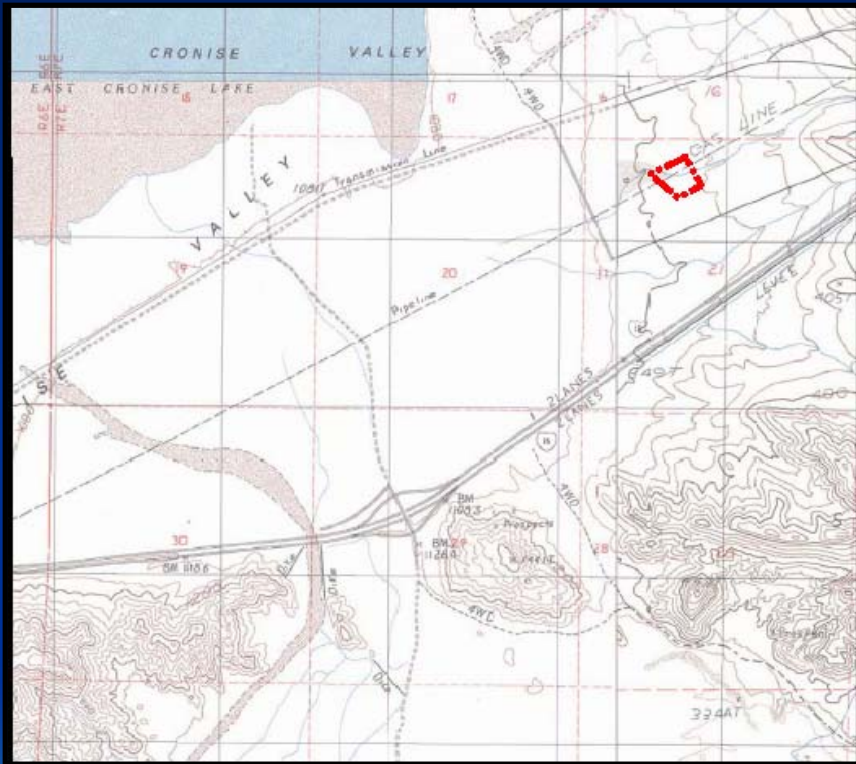
- Leak suspected to occur on 11/21/04
- Leak involved 14" multi-fuel pipeline owned by Kinder Morgan
- Spill (80' geyser) discovered on 11/22/04
- Local Fire Department found elevated levels of gasoline
- California Highway Patrol closed I-15

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- Kinder Morgan responded & closed pipeline
- Impacted section (8 miles) was isolated
- Product was removed from pipeline
- Damaged section was removed from pipeline

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- Spill located entirely on public land managed by the Bureau of Land Mgt.
- Site in category 3 habitat for Federally listed California Desert Tortoise
- Site Located near Cronese Lake Area of Critical Environmental Concern
- Site south of Soda Mountains Wilderness Area

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- Local and State Agencies responding:
 - San Bernardino County Fire – Haz Mat
 - California Department of Fish and Game
 - California Office of Emergency Services
 - Lahontan Regional Water Quality Control Board
 - California State Fire Marshals Office



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- Federal Agencies responding:
 - U.S. Environmental Protection Agency
 - U.S. Bureau of Land Management
 - U.S. Fish and Wildlife Service



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- Incident Management
 - During Emergency Response – Unified Command (San Bernardino County/California Dept. of Fish & Game/Kinder Morgan)

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- During Recovery Response – Unified Command (BLM/Kinder Morgan)

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- Impacted pipeline is a multi-fuel 14" steel pipe
- Spill site is in drainage that drains to Mojave River
- Damaged pipe sent to Calif. Dept. of Fish & Game contracted lab

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- Adjacent 8" pipeline was
 - exposed & inspected
 - sandblasted & rewrapped

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- 3 ground water wells & soil borings completed
- Depth to ground water determined to be 109'-110'
- Contaminated soil found to 50' depth

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- Contaminated soil was removed from the drainages & the spill spray zone
- Soil removal work had Wildlife Biologist & Archeologist oversight

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- Excavated contaminated soil was stockpiled & placed on liner & covered daily
- Characterization samples were collected for disposal profile
- Contaminated soil was approved for disposal at a thermal processing facility (TPS, Inc.) in Adelanto, CA

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- Transportation of impacted soil began on 12/07/04
- 362 truck loads (approximately 10,300 tons) transported to TPS, Inc. by 12/29/04

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- 7 soil vapor extraction wells installed initially
- Soil vapor extraction pilot testing began on 12/08/04
- 4 additional soil vapor extraction wells completed by 12/24/04

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- Soil vapor extraction system on line on 12/27/04
- Initially with 7 extraction wells

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- New soil vapor extraction system setup on 01/03/05
- Inclement weather & access road flooding delayed operations

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- New soil vapor extraction (SVE) system online 01/06/05
- Capable of extracting higher flow of vapors from subsurface
- SVE system continuing operation for more than one year

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- Backfill of spill spray area and drainages excavations was completed on 01/04/05
- Site restoration implementation underway

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Lessons Learned:

- Maintain open communications
- Involve regulatory agencies early
- Divide the work
- Keep surprises to a minimum



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